

## 1283: Invasion of the tomato leafminer, *Tuta absoluta* in West Africa: Spatial dynamics, ecological niche, and potential for biological control

**Tuesday, September 27, 2016**

**11:30 AM - 11:45 AM**

📍 **Convention Center - Room W224 H**

Since its first detection in 2012 in Senegal *Tuta absoluta* has become a severe threat to the production of tomatoes in West Africa. Objectives of this study were to (i) map the current spatial distribution of the pest in Senegal, (ii) obtain information on population dynamics and damage in the main tomato-producing areas, and (iii) identify alternative host plants and indigenous natural enemies. A trapping network and field survey were implemented from 2013 to 2015 to monitor *T. absoluta* incidence at a regional and nationwide scale. In 2014, pheromone traps did not detect the presence of *T. absoluta* moths in eastern Senegal. In 2015, moths were detected in all fifteen monitored areas throughout the country. Abundance of trapped moths was greatest in coastal Senegal, including the main tomato-producing area (Niayes). Unexpectedly, *T. absoluta* moths were trapped in some areas with few or no tomato crops, including off-season (Vallée du fleuve), hot drylands (Matam and Kidira) and urban environments (Dakar). *T. absoluta* was also detected in eggplant, Ethiopian eggplant, potato and sweet pepper fields, but not in pepper fields. Laboratory tests showed a positive correlation between larval performance on these host plants and female oviposition preference. Very low larval parasitism (0.4%) was observed whereas predators such as *Nesidiocoris tenuis* and *Orius* sp. might be good candidates for biocontrol. Results on the bio-ecology of this invasive pest will be helpful to decision-makers with a view to developing appropriate surveillance and sustainable management strategies.

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